DEPARTMENT OF THE NAVY
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NAVDENCENSDIEGOINST 11330.1D
03
28 FEB 1996

NAVDENCEN SAN DIEGO INSTRUCTION 11330.1D

Subj: WATER AND ALTERNATIVE SOURCES FOR SYSTEMIC FLUORIDES

Ref: (a) MANMED 6-102

1. Purpose. To provide information concerning the fluoride level of the San Diego water supply and how fluoride supplements should be provided as prescribed in reference (a).

2. Cancellation. NAVDENCENSDIEGOINST 11330.1C.

3. Background

a. The systemic and topical effects of fluoride in preventing dental caries are well known and documented. Fluoride ingested during tooth formation is incorporated into the tooth structure, thus increasing its resistance to the attack of organic acids. Solutions which bathe an erupted tooth may add more fluoride to its external surfaces and provide further protection against caries depending upon the concentration of fluoride in the solution and the frequency of the tooth's exposure to it.

b. Numerous epidemiological and controlled studies have documented that children who consume optimum amounts of fluoride during their tooth formative years (birth through 16) have a 30 to 60 percent lower prevalence of dental caries than their counterparts who ingest negligible quantities. Over a lifetime fluoridation has been estimated to reduce coronal and root caries by 20% to 40%. Fluoride is supplied primarily in drinking water, although other methods of supplementation have been employed when the water is fluoride deficient. While much of the anticariogenic effect of waterborne fluorides is brought about systemically during tooth formation, a topical effect occurs as fluoride accumulates on the erupted tooth surface. Anticariogenic benefits from fluoride are therefore possible throughout an individual's lifetime.

4. Alternate Methods of Supplying Systemic Fluoride

a. Fluoride Tablets/Drops. Since 1994 the dosage recommendation for fluoride supplementation given specific water concentration levels has been:

H20 (FL 2)	less than 0.3 ppm F	0.3-0.6 ppm F	more than 0.6 ppm
AGE			
0 - 6 mos.	0	0	0
6 mos. - 3 yrs.	0.25mg/day	0	0
3 yrs. - 6 yrs.	0.50mg/day	0.25 mg/day	0
6 yrs. - up to at least 16 yrs.	1.0mg/day	0.5 mg/day	0

b. Bottled Water. Fluoridated bottled water contains 1.0 ppm of fluoride. In the San Diego area it is available for home delivery only in five gallon bottles and the cost is similar to that of non-fluoride water. It should be used for all cooking and food preparation as well as drinking. The primary disadvantage, other than cost, is that only water consumed in the home will be fluoridated. If children's daily water intake is consumed at school or elsewhere, they may not ingest enough fluoride for optimum benefit.

c. Fluoride Vitamins. Fluoride vitamin preparations are available in both chewable and liquid form, but vitamins should not be prescribed indiscriminately. Only those children who require vitamin supplementation should receive fluoride in this manner; therefore, fluoride vitamins should be prescribed by the child's pediatrician.

5. Action. All branch dental clinics in the San Diego area should ensure that attached dental personnel are familiar with the fluoride content of area water supplies. Personnel involved in direct patient care should inform patients of the benefits of systemic fluoride and make recommendations for children. Prescriptions should be readily available to all patients who would benefit from them. Patients should be cautioned to use only one systemic fluoride source and to discontinue taking any supplement when they leave San Diego until the fluoride content of the water in their new location can be determined.

D. D. WOOFTER

Dist:
List I, Case 1, 2

c. Systemic effects of fluoride are dependent upon the total fluoride intake. Adults, an average, ingest 1-3 mg of fluoride per day in their normal diets. Fluoride levels in San Diego vary from day to day, water company to water company. Ranging from only .03 to 0.4 ppm, the US Public Health Service recommended fluoride levels are based on the annual average of maximum daily air temperature (°F) (for 63.9°F - 70.6°F, the optimum FL level is .9 PPM). In addition, all children over the age of six, if able to swish and fully expectorate, should use a daily fluoride mouth rinse. This is available in over-the-counter preparations (e.g., .05% Sodium Fluoride).

4. Alternate Methods of Supplying Systemic Fluoride

a. Fluoride tablets/drops. Since 1994 the dosage recommendation for fluoride supplementation given specific water concentration levels has been:

H_2O [FL_2]	less than 0.3 ppm F	0.3-0.6 ppm F	more than 0.6 ppm
AGE			
0 - 6 mos.	0	0	0
6 mos. - 3 yrs.	0.25mg	0	0
3 yrs. - 6 yrs.	0.50mg	0.25mg	0
6 yrs. - up to at least 16 yrs.	1.0mg	0.5mg	

b. Bottled Water. Fluoridated bottled water contains 1.0 ppm of fluoride. In the San Diego area it is available for home delivery only in five gallon bottles and the cost is similar to that of non-fluoride water. It should be used for all cooking and food preparation as well as drinking. The primary disadvantage, other than cost, is that only water consumed in the home will be fluoridated. If children's daily water intake is consumed at school or elsewhere, they may not ingest enough fluoride for optimum benefit.

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